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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,600	03/29/2001	Yutaka Kuroshima	KOKUSAI 066	4163

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EXAMINER

NGUYEN, LEE

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 03/22/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/819,600

Applicant(s)

KUROSHIMA ET AL.

Examiner

LEE NGUYEN

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-13 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 10(a), 10(b), 11 and 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the

time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior figures 10(a), 10(b), 11 and 12 (referred to as the admitted prior art hereinafter) in view of So (US 5,565,865).

Regarding claim 1, the admitted prior art teaches a portable electronic equipment (figs. 10(a)-12) comprising a casing 111, a circuit board 129 accommodated in said casing 11 and having a plurality of switch contacts 122 formed thereon; a plurality of button keys 118 corresponding to said switch contacts 122 and mounted on said casing, said button keys being adapted to be depressed for switching on and off said corresponding switch contacts from outside. The admitted prior art fails to teach a plurality of stoppers each provided on said casing for limiting an amount of depression of a corresponding one of said button keys. In order to prevent

the circuit board in a key-pad damaged by excess forces depressed on the button keys, So teaches a plurality of stoppers 4 which are used to stop the buttons 23 (col. 4, lines 13-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide teaching of So to the admitted prior art in order avoid damaging the circuit board of the portable electronic device.

Regarding claim 4, the admitted as modified also teaches a key seat 119 (fig. 11 of the admitted prior art) which is disposed on said circuit board 129 and has a plurality of seat sections 123 corresponding to said button keys, said key sections being connected to each other through bridging portions (fig. 3, numeral 5a of So).

Regarding claim 5, the admitted prior art as modified also teaches a key seat 123 which is disposed on said circuit board and has a plurality of seat sections corresponding to said button keys, said seat sections being formed independent of each other (fig. 12 of the admitted prior art).

Regarding claim 6, the admitted prior art as modified also teaches a case cover 111 which is provided on said casing for preventing said button keys from popping out of said casing (fig. 10(a) of the admitted prior art).

Regarding claim 7, the admitted prior art as modified also teaches that when one of said button keys, is pushed in, a corresponding one of said stoppers is placed into abutment against a corresponding flange to thereby limit an amount of depression of said one button key (col. 4, lines 13-21 of So).

Regarding claim 8, the admitted prior art as modified also teaches that said casing comprises a front case 111 having an outer surface and an inner surface on opposite sides thereof and a rear case 112 detachably assembled with said front case (fig. 11 of the admitted prior art), and said stoppers 4 are provided on the inner surface of said front case at locations at which said corresponding button keys are exposed from the outer surface of said front case (fig. 6 of So).

Regarding claim 9, the admitted prior art teaches a portable electronic equipment (figs. 10(a)-11), comprising: a casing 111 having a plurality of openings 117 formed therethrough at predetermined locations: a circuit board 129 accommodated in said casing and mounting thereon electronic components and a key seat 119, said key seat 123 having a plurality of click plates 122 at locations corresponding to said openings in said casing, each of said click plates being adapted to be pushed in to

generate a switch signal; a plurality of button keys 118 disposed in said openings, respectively, and each having a manipulation end face protruded from a corresponding one of said openings, a button key seat 119 disposed at an end of each of said button keys opposite the manipulation end face thereof and having a plurality of contacts which are each placed into abutment against a corresponding one of said click plates upon depression of a corresponding button key. The admitted prior fails to teach a plurality of stoppers provided at said openings, respectively, in said casing for limiting an amount of movement of a corresponding button key in a direction toward said circuit board. In order to prevent the circuit board in a key-pad damaged by excess forces depressed on the button keys, So teaches a plurality of stoppers 4 which are used to stop the buttons 23 (col. 4, lines 13-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide teaching of So to the admitted prior art in order avoid damaging the circuit board of the portable electronic device.

Regarding claim 10, the admitted prior art as modified also teaches that said button keys 118 and said button key seat 119 are integrally formed with each other (fig. 11 of the admitted prior art).

Regarding claim 11, the admitted prior art teaches a portable electronic equipment (figs. 10a-11), comprising: a casing 111 having a plurality of openings 117 formed therethrough at predetermined location; a circuit board 129 accommodated in said casing and mounting thereon electronic components and a key seat 123, said key seat having a plurality of click plates 122 at locations corresponding to said openings in said casing, each of said click plates being adapted to be pushed in to generate a switch signal, a plurality of button keys 118 disposed in said openings, respectively, and each having a manipulation end face protruded from a corresponding one of said openings, a button key seat 119 disposed at an end of each of said button keys opposite the manipulation end face thereof and having a plurality of contacts which are each placed into abutment against a corresponding one of said click plates upon depression of a corresponding button key. The admitted prior art fails to teach a stopper provided at the openings in said casing for limiting an amount of movement of each of said button key seats in a direction toward said circuit board. In order to prevent the circuit board in a key-pad damaged by excess forces depressed on the button keys, So teaches a plurality of stoppers 4 which are used to stop the buttons 23 (col. 4, lines 13-21). Therefore, it would

have been obvious to one of ordinary skill in the art at the time the invention was made to provide teaching of So to the admitted prior art in order avoid damaging the circuit board of the portable electronic device.

Regarding claim 12, the claim is interpreted and rejected for the same reason as set forth in claim 10.

Regarding claim 13, the admitted prior art as modified teaches that said stopper comprises a suppression plate disposed in said casing and fixedly attached to said casing (see numeral 4 of So).

Allowable Subject Matter

6. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 2, the prior art of record fails to teach that said button keys are each formed with a flange, and said stoppers are each formed into such a configuration as to support an entire outer periphery of the flange of a corresponding button key.

Regarding claim 3, the prior art of record fails to teach that said button keys are each formed with a flange, and said stoppers are each

formed into such a configuration as to support an outer periphery of the flange of a corresponding button key in a plurality of directions.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is (703)-308-5249. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VIVIAN CHIN can be reached on (703) 308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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LEE NGUYEN
Primary Examiner
Art Unit 2682

3/16/04